

ABSTRACTABRASIVE GRAINS FORMED OF POLYCRYSTALLINE ALUMINA

The invention relates to an abrasive grain containing electro-fused alumina, formed of crystals of hexagonal structure less than 100 μm in size, preferably less than 30 μm , and further preferably less than 5 μm , having a density that is greater than 97 %, preferably 98 %, of the theoretical density of alumina and a Knoop hardness of more than 2000.

A further purpose of the invention is a method for producing abrasive grains containing alumina, comprising melting of the alumina, its casting at a constant flow rate of less than 80 kg/min, and its cooling by dispersion of the molten alumina in fine droplets to give particles with a size of less than 1 mm. This dispersion is, preferably, conducted by ultrasound-assisted atomization using a frequency of between 15 and 50 MHz.

The abrasive grains of the invention are used in particular to produce grindwheels.